APPENDIX B

SPARE PARTS LIST

B.1 FLYAWAY SPARE PARTS LIST

Listed below are the parts included in the Flyaway Spare Parts Kit [ ] Drawing No. 1-119-A-090) which is supplied with each Portable Take-Up Assembly. These parts are for immediate usage and the kit should be replenished as they are used. STAT

Part No.	Part Description	Qty Per Kit
1-119-B-017	Idler Roller Assembly	1
2-920-A-006	Blade, Knife	1 Pkg.
948-A-161-1	Belt, Positive Drive, 3/8 Pitch, 1/2 Wide, Light Duty	1
951-A-232-53	Fuse, Slo-Blo	5
956-A-145-3	Potentiometer, Type AB	1
956-A-146-8	Capacitor, Electrolytic, Metal Case	2
956-A-153	Diode, Rectifier, Silicon, Miniature, 1 Watt	2

B.2 DEPOT SPARE PARTS LIST

The parts included in the Depot Spare Parts Kit* [ ] Drawing No. 1-119-A-099) for the Portable Take-Up Assembly are listed below. These parts are recommended to maintain one machine in normal operation for one year. However, the maintenance recommendation for a group of machines is not a straight line multiple of the kit. STAT

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* This kit is supplied only at customer request and a price to be negotiated. A kit for quantities other than one also can be supplied if the customer so desires.

Declass Review by NGA.

Part No.	Part Description	Qty Per Kit
2-119-B-016	Seal	2
1-119-B-017	Idler Roller Assembly	2
1-119-D-042	Amplistat, Modified	1
2-119-A-096	Potentiometer & Switch Assembly	1
2-920-A-006	Blade, Knife	4 pkgs.
2-948-A-153	Gear, Spur	1
2-948-A-156	Gear, Spur	1
948-A-161-1	Belt, Positive Drive 3/8 Pitch, 1/2 Wide Light	1
2-949-A-045	Ball Bearing 7R12 3/4 Shaft	1
2-949-A-046	Ball Bearing 7R14 7/8 Shaft	1
2-949-A-048	Ball Bearing 7R16 1" Shaft	2
2-949-A-117	Bushing, Ball	1
2-950-A-005	Motor-Torque	1
2-951-A-002	Switch	1
2-951-A-122	Fuse Holder	1
2-951-A-125	Switch, Foot Micro SWT. D.P.D.T.	
951-A-232-53	Fuse, Slo-Blo	1 pkg. (6)
951-A-237-2	Switch, Door Interlock	1
2-956-A-019	Capacitor, Motor Running	1
956-A-144-1	Resistor, Composition 1/2 Watt ± 10%	1
956-A-146-8	Capacitor, Electrolytic, Metal Case	2
956-A-147-1	Resistor, Wirewound Adjustable, 25 Watt ± 10%	1
956-A-148-1	Resistor, Composition 2 Watt ± 10%	1
956-A-149-2	Capacitor, Dielectric ± 10%	1
956-A-152-1	Control Knob, Round	1
956-A-153-1	Diode, Rectifier, Silicon, Miniature 1 Watt	2
952-A-300-1	3 Conductor Rubber Covered 18 AWG Power Cord and Hubbell 3 Prong Power Cord Plug	1
*	Safelight Marker Electroluminescent Cord Type [redacted] No. 532-7050-205)	1
*	Safelight Marker Electroluminescent Cord Type [redacted] No. 532-7050-209)	1
*	Matte Kodacel TA-401 .010 Thick - 2" x 10"	1 Sheet

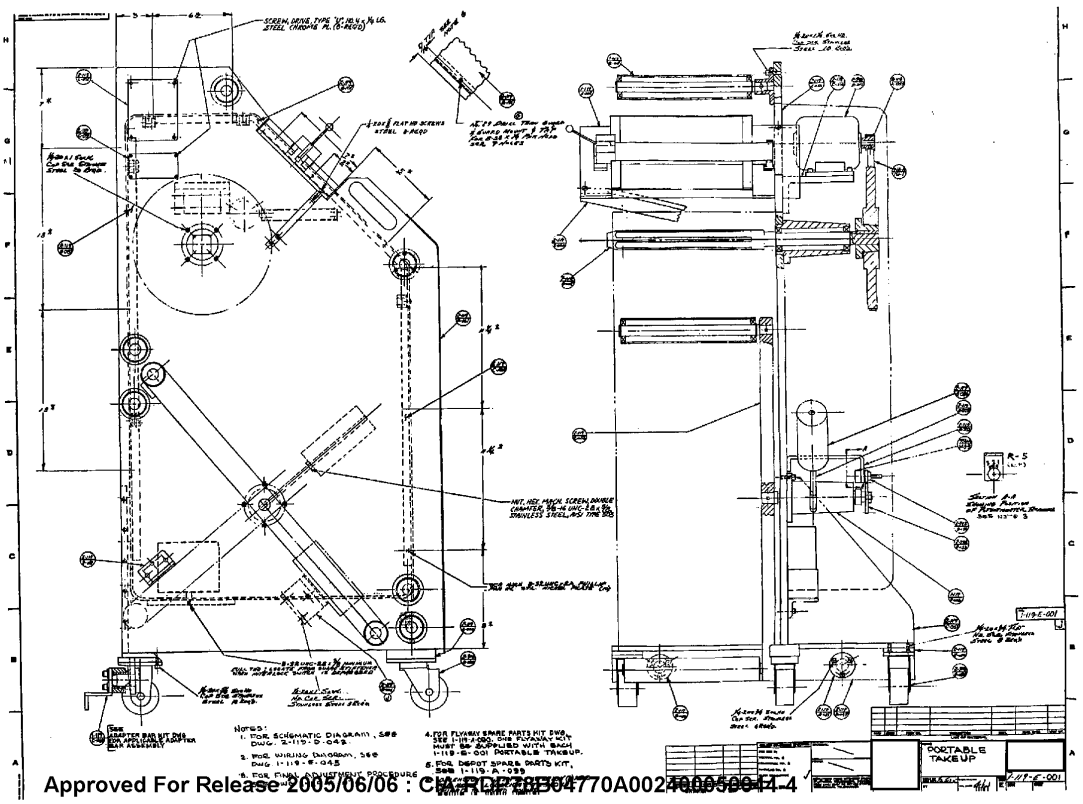
STAT

STAT

* Specified in Note 1 of Assembly Drawing 1-119-E-002 which is included in Appendix C.

APPENDIX C

The assembly drawings on the following pages serve as a parts list for the portable take-up assembly. Following each assembly drawing is a reference list which includes a description of each part called out by number on the drawing and the quantity of each part per assembly.



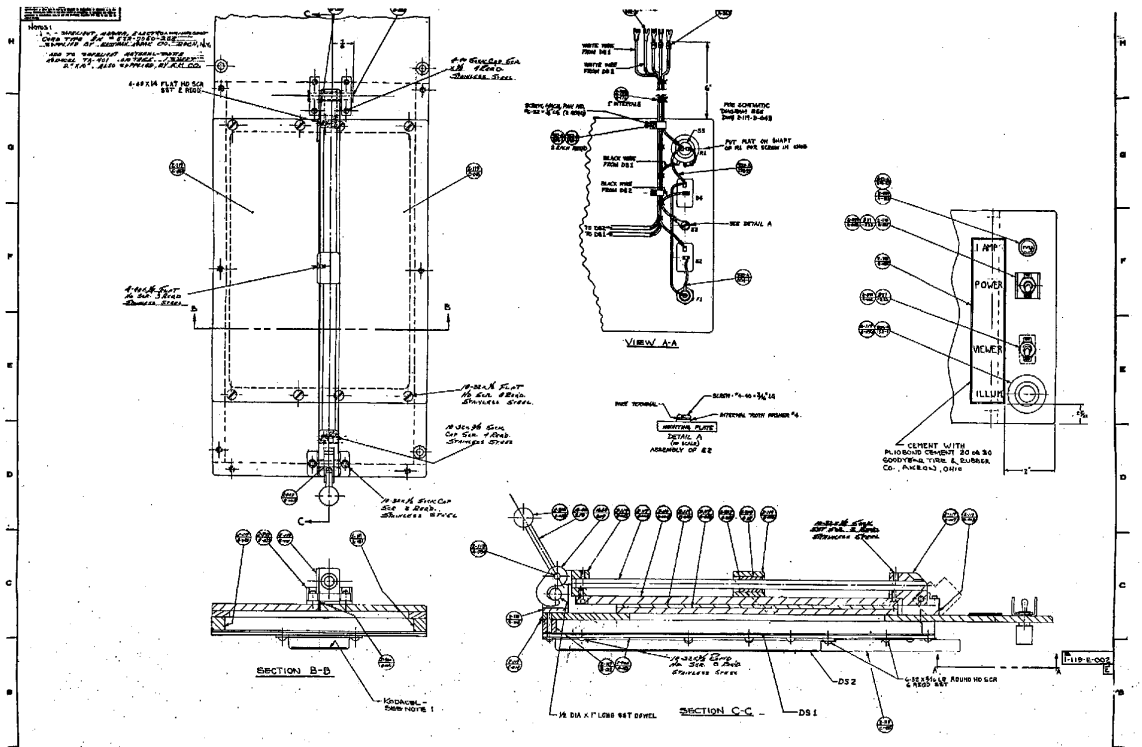
STAT

REFERENCE LIST
FOR
PORTABLE TAKE-UP ASSEMBLY
(Drawing No. 1-119-E-001)

Part No.	Description	Quantity per Assembly
1-119-E-002	Viewer & Trim Knife Assembly	1
1-119-B-017	Idler Roller Assembly	6
1-119-B-026	Elevator Arm Housing Assembly	1
1-119-C-056	Elevator Arm Assembly	1
1-116-B-005	Take-Up Assembly	1
2-119-C-092	Identification Plate	1
2-119-B-025	Weight Rod	1
2-119-B-049	Guide Pin Mount	1
2-119-B-050	Front Caster Mount	2
2-119-B-051	Diamond Pin	1
2-119-B-052	Guide Pin	1
2-119-B-053	Potentiometer Bracket	1
2-119-B-054	Rear Caster Mount	1
2-119-C-055	Gusset	1
2-119-E-058	Mounting Plate	1
2-950-A-005	Elinco Torque Motor	1
2-119-A-095	Positive Drive Pulley 3/8 Pitch	1
948-A-161-1	Positive Drive Belt 3/8 Pitch	1
2-948-A-153	Boston Gear Y3280	1
2-948-A-156	Boston Gear Y3232	1
2-916-A-071	Stationary Caster, Darnell Cat. No. 16-63-SND	2
2-916-A-070	Swivel Caster, Darnell Cat. No. 16-63-ND	1
2-119-C-060	Support Arm	1

(Drawing No. 1-119-E-001)
(Continued)

Part No.	Description	Quantity per Assembly
2-119-D-061	Front Guard	1
2-119-B-072	Elevator Arm Stop	1
2-119-B-073	Label	1
2-119-E-076	Portable Take-Up Rear Guard	1
2-119-C-078	Motor Mount	1
2-119-B-083	Rear Guard Mount	6
2-119-B-025	Weight Rod	1
2-119-B-086	Weight	1
2-119-C-075	Threading Diagram	1
1-119-B-089-1	Adapter Bar Kit for use with Portable Take-Up Assembly	1
1-119-A-090	Flyaway Spare Parts Kit Portable Take-Up	1
2-119-B-106	Counterbalance Stop	1



STAT

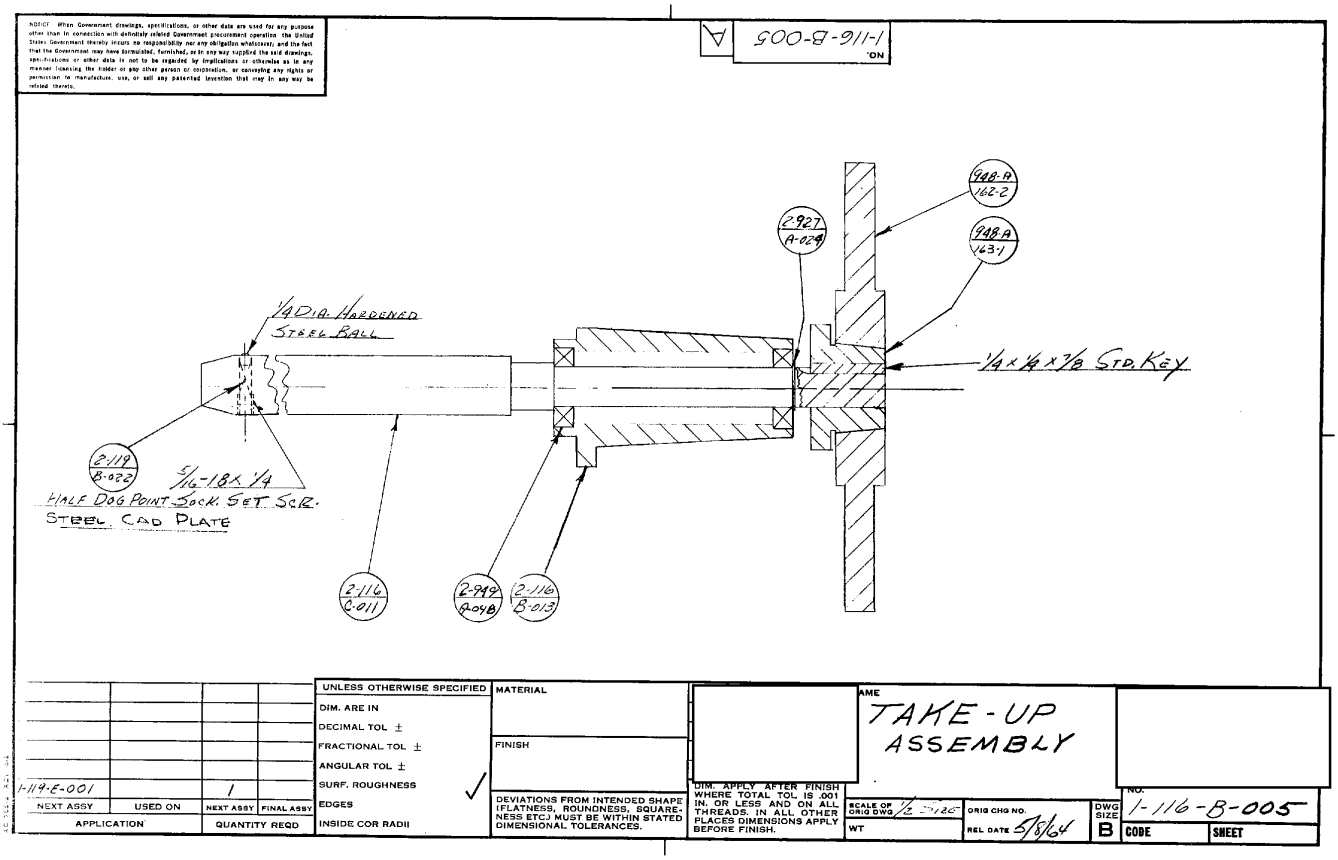
REFERENCE LIST
FOR
VIEWER AND TRIM KNIFE ASSEMBLY
(Drawing No. 1-119-E-002)

Part No.	Description	Quantity per Assembly
2-119-B-003	Cam Adapter	1
2-119-B-004	Bearing Shaft	1
2-119-B-005	Holddown Bar	1
2-119-B-006	Bearing Housing	1
2-119-B-007	Pivot Block	1
2-119-B-008	Pillow Block Spacer	2
2-119-B-010	Clamping Bracket	1
2-119-B-011	Blade Clamp	1
2-119-B-012	Front Spacer	1
2-119-C-014	Mounting Plate	1
2-119-C-015	Cover	1
2-119-B-016	Seal	1
12-66-210	Handle	1
12-66-209	Clamp	1
2-916-A-069	Ball Knob 3/4 Dia. 1/4-20 Insert	1
2-949-A-117	Ball Bushing Thomson A-61014	1
2-927-A-055	Retaining Ring Waldes N-5000-62	2
2-920-A-006	Knife Blade Std. Shick Injector Blade	1
2-949-A-039	Boston Pillow Block PPB4	2
2-949-A-065	Oilite Bearing AA3921	2
2-119-B-068	Knife Guard	1
2-119-B-066	Shaft	1
2-119-C-069	Notched Cover	1

(Drawing No. 1-119-E-002)
(Continued)

Part No.	Description	Quantity per Assembly
2-952-A-107	Wire #18 AWG 6" Long	
2-952-A-121	Wire Terminal	8
2-119-B-081	Side Spacer	2
2-119-B-077	Viewer Cord Cover	1
2-119-B-085	Control Label	1
2-119-B-031	Switch Control Guard	1
2-951-A-122	Fuse Holder, Buss Type HKP	1
951-A-232-53	Slow-Blow Fuse	1
956-A-152-1	Round Control Knob	1
951-233	ON-OFF Indicator Plate	2
2-951-A-002	Flush Tumbler Switch	2
952-A-294-1	Ground Terminal, Solder	1
2-119-A-096	Potentiometer and SW Assembly	1
	Safelight Marker [redacted] #532-7050-205 (Electroluminescent Cord Type)	1
	Kodacel TA-401 .010 Thick 2" x 10"	1
2-119-A-094	Holddown Clamp Pin	1

STAT



REFERENCE LIST
FOR
TAKE-UP ASSEMBLY
(Drawing No. 1-116-B-005)

Part No.	Description	Quantity per Assembly
2-116-C-011	Take-Up Spindle	1
2-116-B-013	Bearing Take-Up Shaft Housing	1
2-949-A-048	Ball Bearing N.D. 7R 16	2
2-927-A-024	Retaining Ring, Truarc 5100-100	2
948-A-162-2	Positive Drive Pulley 3/8 Pitch	1
2-119-B-022	Spring	1
948-A-163-1	Positive Drive Pulley Bushing	1

NOTICE – When Government drawings, specifications, or other data are used for any purpose other than in connection with definitely related Government procurement operation the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

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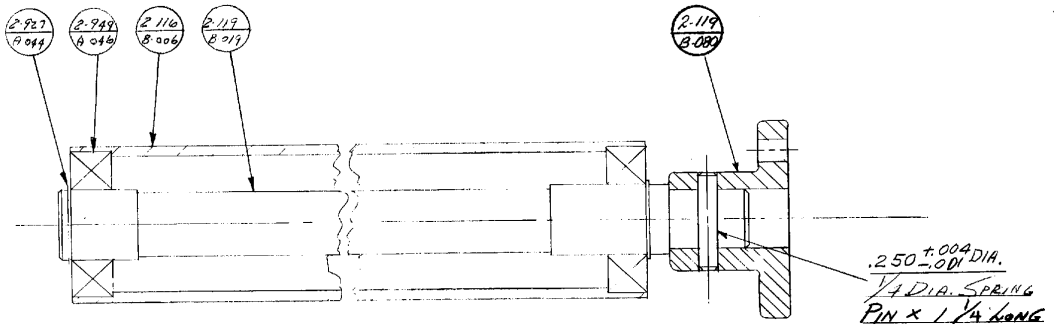


114-2-001		6	
NEXT ASSY	USED ON	NEXT ASSY	FINAL ASSY
APPLICATION		QUANTITY REQD	

UNLESS OTHERWISE SPECIFIED
DIM. ARE IN
DECIMAL TOL ±
FRACTIONAL TOL ±
ANGULAR TOL ±
SURF. ROUGHNESS ✓
EDGES
INSIDE COR RADII

MATERIAL

FINISH

DEVIATIONS FROM INTENDED SHAPE (FLATNESS, ROUNDNESS, SQUARENESS ETC) MUST BE WITHIN STATED DIMENSIONAL TOLERANCES.

DIM. APPLY AFTER FINISH WHERE TOTAL TOL IS .001 IN. OR LESS AND ON ALL THREADS. IN ALL OTHER PLACES DIMENSIONS APPLY BEFORE FINISH.

NAME IDLER ROLLER ASSEMBLY

SCALE OF ORIG DWG F.S.
WT

ORIG CHG NO.
REL DATE 5/6/64

DWG SIZE B
CODE

NO. 1-119-B-017
SHEET

PTU-1

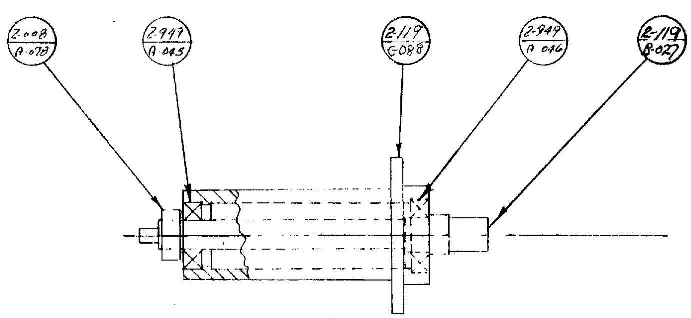
REFERENCE LIST
FOR
IDLER ROLLER ASSEMBLY
(Drawing No. 1-119-B-017)

Part No.	Description	Quantity per Assembly
2-119-B-019	Idler Roller Shaft	1
2-116-B-006	Roller	1
2-927-A-094	Retaining Ring, Truarc 5100-87	2
2-949-A-096	Ball Bearing N.D. 7R 14	2
2-119-B-080	Idler Roll Mount	1

1-119-B-026

REVISIONS

SYM	DESCRIPTION	DATE	APPROVAL



1-119-E-001		1	
NEXT ASSY	USED ON	NEXT ASSY	FINAL ASSY
APPLICATION		QUANTITY REQD	

UNLESS OTHERWISE SPECIFIED
DIM. ARE IN
DECIMAL TOL ±
FRACTIONAL TOL ±
ANGULAR TOL ±
SURF. ROUGHNESS ✓
EDGES
INSIDE COR RADII

MATERIAL

FINISH

DEVIATIONS FROM INTENDED SHAPE (FLATNESS, ROUNDNESS, SQUARENESS ETC.) MUST BE WITHIN STATED DIMENSIONAL TOLERANCES.

ENGR

DIM. APPLY AFTER FINISH WHERE TOTAL TOL IS .001 IN. OR LESS AND ON ALL THREADS. IN ALL OTHER PLACES DIMENSIONS APPLY BEFORE FINISH.

NAME
ELEVATOR ARM
HOUSING ASSY.

SCALE OF ORIG DWG 1/2 SIZE
WT
ORIG CHG NO.
REL DATE 5/8/64
DWG SIZE B
NO. 1-119-B-026
CODE
SHEET

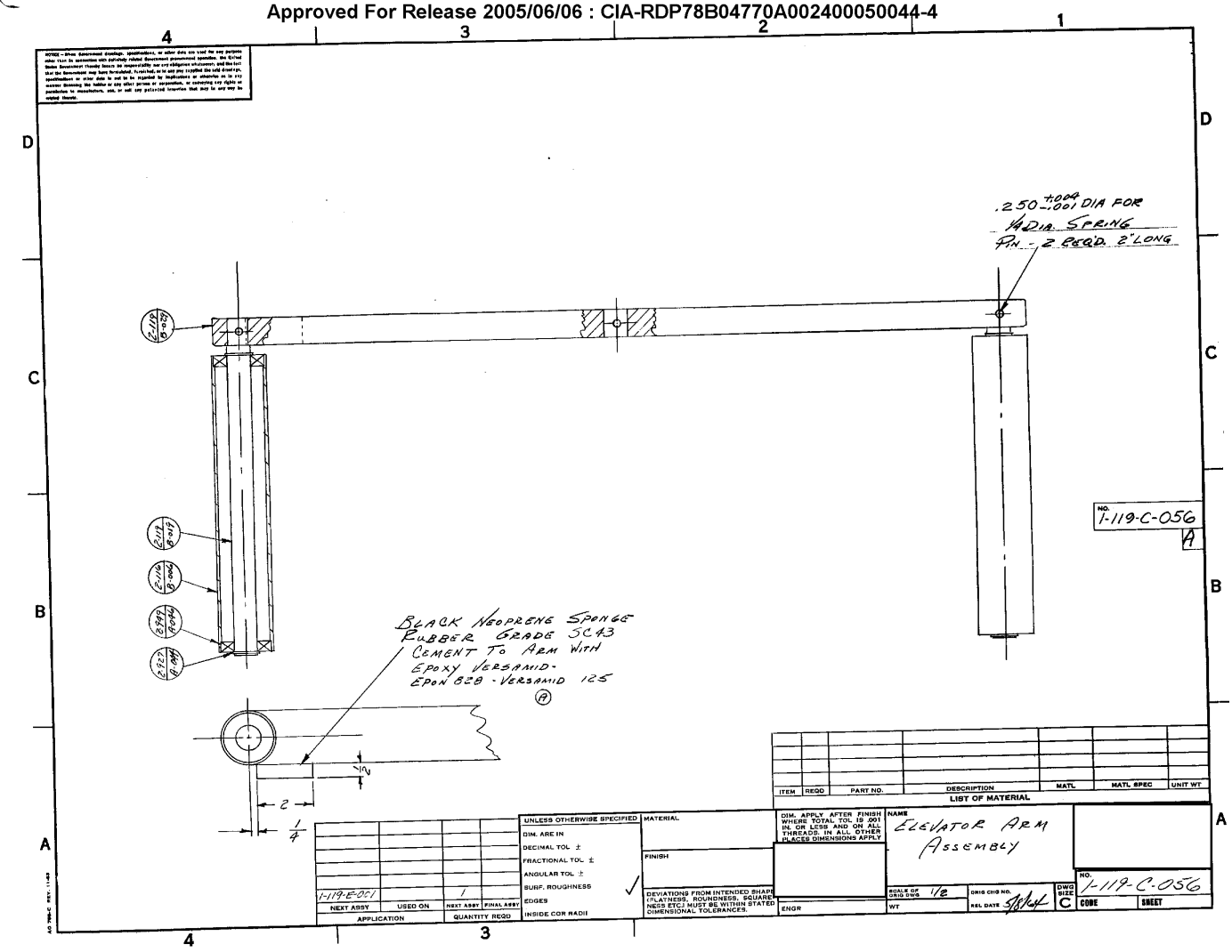
AO 768 REV

STAT

PTU-1

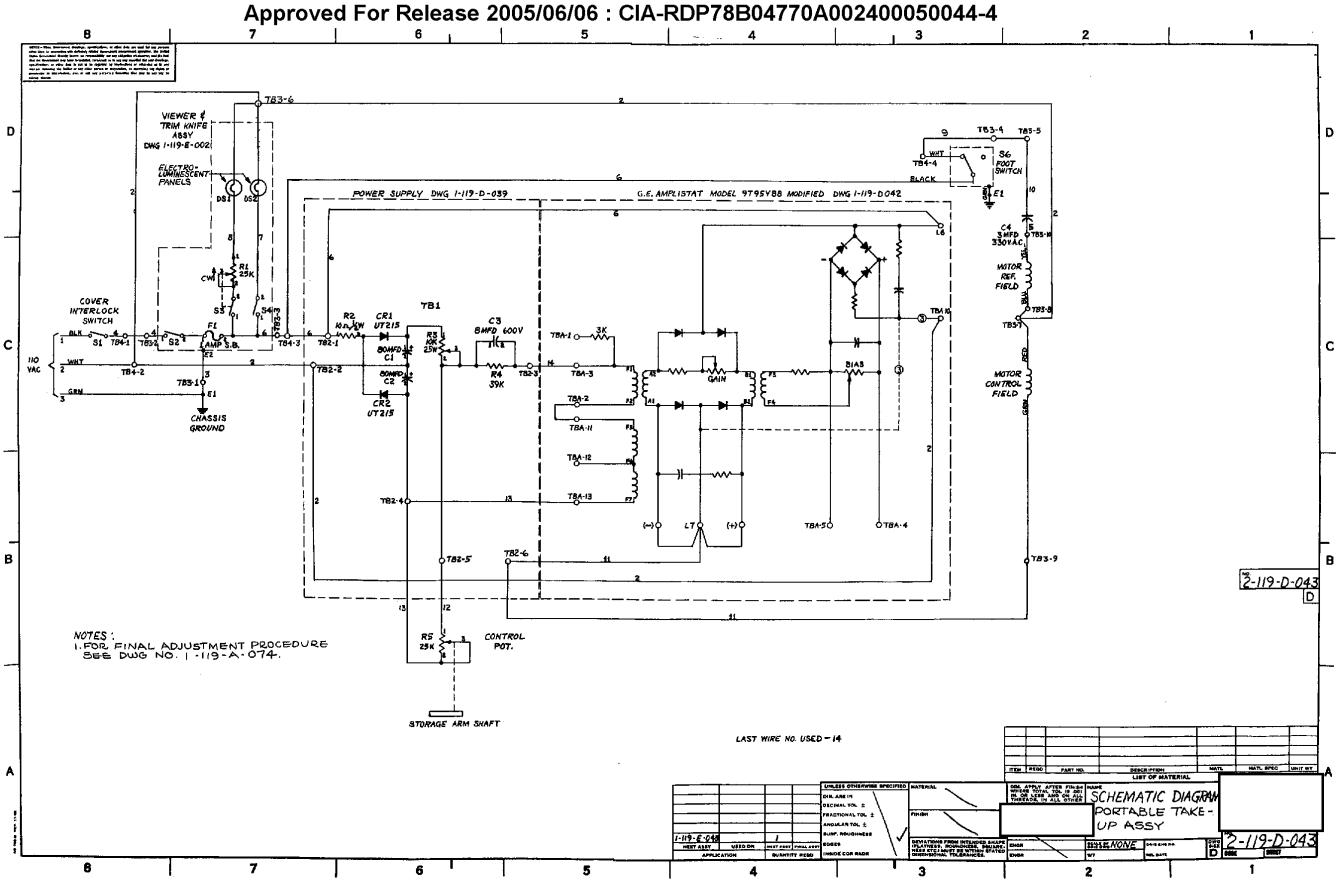
REFERENCE LIST
FOR
ELEVATOR ARM HOUSING ASSEMBLY
(Drawing No. 1-119-B-026)

Part No.	Description	Quantity per Assembly
2-119-B-027	Elevator Arm Shaft	1
2-119-C-028	Elevator Arm Housing	1
2-008-A-078	Collar	1
2-949-A-045	Ball Bearing N.D. 7R 12	1
2-949-A-096	Ball Bearing N.D. 7R 14	1

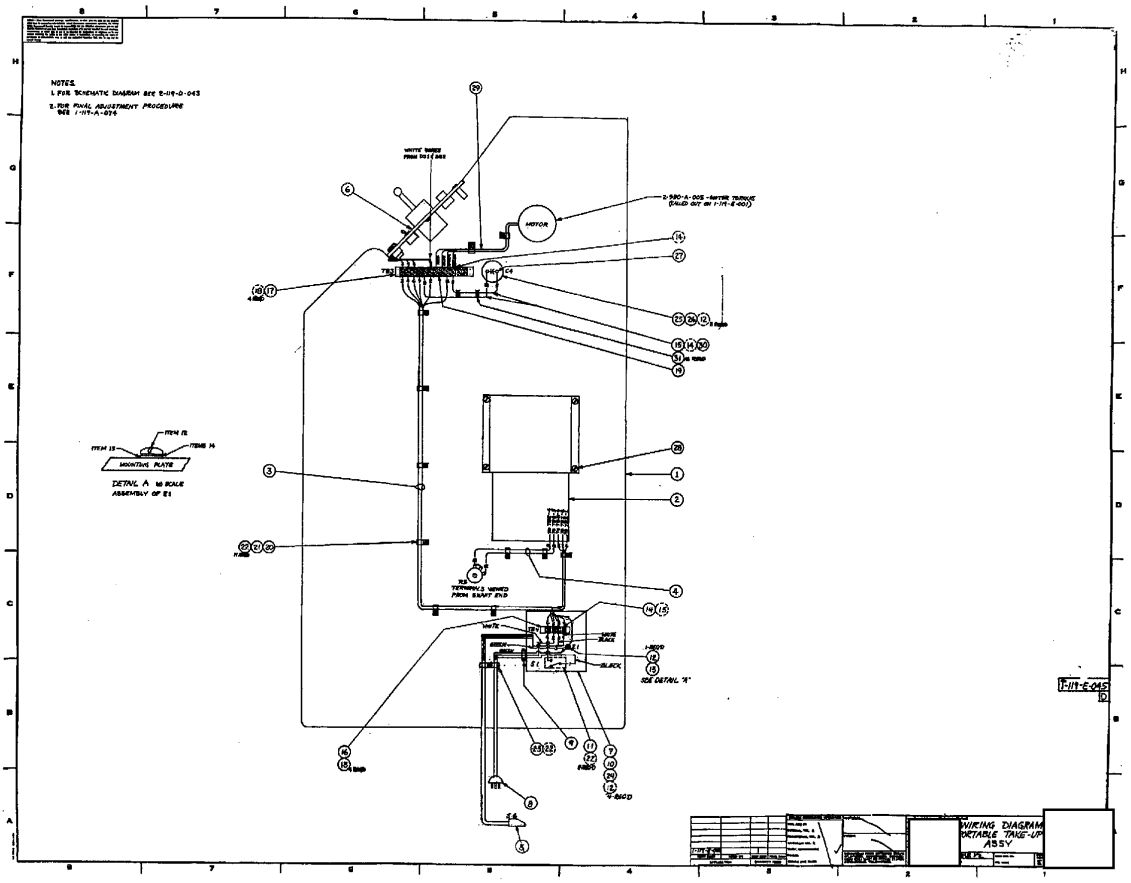


REFERENCE LIST
FOR
ELEVATOR ARM ASSEMBLY
(Drawing No. 1-119-C-056)

Part No.	Description	Quantity per Assembly
2-119-B-029	Elevator Arm	1
2-119-B-019	Idler Roller Shaft	2
2-116-B-006	Roller	2
2-927-A-044	Retaining Ring, Truarc 5100-87	4
2-949-A-046	Ball Bearing N.D. 7R 14	4



PTU-1



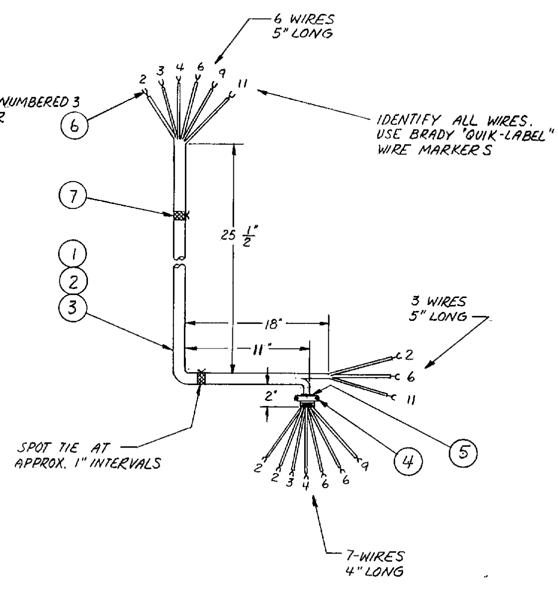
STAT

C-17

REFERENCE LIST
FOR
WIRING DIAGRAM
(Drawing No. 1-119-E-045)

Callout	Required	Part No.	Description
1	1	2-119-E-058	Mounting Plate
2	1	1-119-D-041	Power Supply - Amplistat Assembly
3	1	1-119-C-079	Wiring Harness Assembly
4	1	1-119-C-035	Cable W1
5	1	1-119-C-064	Footswitch Assembly
6	1	1-119-E-002	Viewer & Trim Knife Assembly
7	1	2-119-C-087	Modified Extension Ring
8	1	952-A-300-1	Cord Set
9	1	952-A-306	Cord Grip Connector
10	1	952-A-303-1	Cover
11	1	951-A-237-2	Door Interlock Switch
12	8		Screw, Mach, Pan Hd, Slotted, #6-32 x 1/2" LG, Stl, Cad Pl
13	1		Internal Tooth Washer, #6, Stl, Cad Pl
14	11	952-A-302-2	Slotted Terminal Wire
15	A.R.	952-A-298-21	Stranded Hook-Up Wire
16	1	2-956-A-032	Terminal Strip
17	1	2-956-A-099	Terminal Strip
18	8		Screw, Mach, Pan Hd, Slotted, #6-32 x 5/8" LG, Stl, Cad Pl
19	2	2-952-A-258	Jumper
20	13	952-A-295-1	Nylon Cable Clamp
21	13	927-A-056-1	"D" Washer
22	17		Screw, Mach, Pan Hd, Slotted, #6-32 x 3/8" LG, Stl, Cad Pl
23	2	952-A-293-3	Clamp, Cable or Pipe, Duplex
24	4		Washer, Plain, #6, Stl, Cad Pl
25	1	2-956-A-019	Capacitor
26	1	952-A-304-5	Vertical Mounting Clamp
27	A.R.	908-A-004-1	Solder
28	4		Screw, Mach, Pan Hd, Slotted, #1/4-20 x 5/8" LG, Stl, Cad Pl
29	A.R.	952-A-305-5	Insulation Sleeving
30	A.R.	2-952-A-267	Identification Numbers
31	A.R.	2-952-A-172	Black Tape Lacing

NOTES
1. WIRES NUMBERED 2 HAVE WHITE INSULATION, WIRE NUMBERED 3 HAS GREEN AND ALL OTHER WIRES HAVE BLACK.



NO. 1-119-C-079 A

1-119-E-045		1	
NEXT ASSY	USED ON	NEXT ASSY	FINAL ASSY
APPLICATION		QUANTITY REQD	

UNLESS OTHERWISE SPECIFIED
DIM. ARE IN INCHES
DECIMAL TOL ± —
FRACTIONAL TOL ± 1/4"
ANGULAR TOL ±
SURF. ROUGHNESS
EDGES
INSIDE COR RADII

MATERIAL
FINISH
DEVIATIONS FROM INTENDED SHAPE (FLATNESS, ROUNDNESS, SQUARENESS ETC.) MUST BE WITHIN STATED DIMENSIONAL TOLERANCES.

DIM. APPLY AFTER FINISH WHERE TOTAL TOL IS .001 IN. OR LESS AND ON ALL THREADS. IN ALL OTHER PLACES DIMENSIONS APPLY BEFORE FINISH.

NAME
WIRING HARNESS ASS'Y
PORTABLE TAKE-UP

SCALE OF ORIG DWG NONE
ORIG CHG NO.
REL DATE
DWG SIZE C
NO. 1-119-C-079
CODE
SHEET

PTU-

STAT

STAT

REFERENCE LIST
FOR
WIRING HARNESS ASSEMBLY
(Drawing No. 1-119-C-079)

Item	Reqd	Part No.	Description
1	AR	952-A-298-26	Stranded Hook-Up Wire
2	AR	952-A-298-25	Stranded Hook-Up Wire
3	AR	952-A-298-21	Stranded Hook-Up Wire
4	1	952-A-306	Grip Cord Connector
5	1/2"	952-A-305-3	Insulation Sleeving
6	16	952-A-302-2	Slotted Wire Terminal
7	AR	2-952-A-172	Black Lacing Tape
8	AR	2-952-A-267	Identification Numbers

ADAPTER BAR KIT
FOR USE WITH PORTABLE TAKE-UP ASSEMBLY

PART NO.	ADAPTER BAR ASSY	FOR USE WITH	ADDITIONAL HARDWARE REQD	REMARKS
1-119-B-089-1	1-119-C-088	VERSAMAT MODELS II, IIA, IIC, IIM	PLATE NUT 2-119-A-104 (2 REQD)	FOR CUSTOMER INSTALLATION INSTRUCTIONS SEE APPENDIX A OF INSTRUCTION MANUAL PTU-1
			SCREW, MACH. SCH, CAP 5/16-18 UNC-2B x 3/4 SST (4 REQD)	FOR IN HOUSE INSTRUCTIONS SEE INSTALLATION DRAWINGS 2-119-C-097 OR 2-119-D-098
			WASHER, FLAT, PLAIN 5/16 NOM SST (4 REQD)	
			WASHER, SPRINGLOCK 5/16 NOM SST (4 REQD)	
			DISC, COVER 2-119-B-100 (1 REQD)	
			SCREW, SELF-TAPPING, TYPE A, NO. 10 x 1/2 PHILLIPS PAN HEAD, STEEL, NICKEL PLATE (4 REQD)	

NO. 1-119-C-089 B

LIST OF MATERIAL

ITEM	REQD	PART NO.	DESCRIPTION	MATL	MATL SPEC	UNIT WT

APPLICATION		QUANTITY REQD		
NEXT ASSY	USED ON	NEXT ASSY	FINAL ASSY	
1-119-E-001		1		

UNLESS OTHERWISE SPECIFIED
DIM. ARE IN
DECIMAL TOL ±
FRACTIONAL TOL ±
ANGULAR TOL ±
SURF. ROUGHNESS
EDGES
INSIDE COR RADII

MATERIAL
FINISH
DEVIATIONS FROM INTENDED SHAPE (FLATNESS, ROUNDNESS, SQUARENESS ETC.) MUST BE WITHIN STATED DIMENSIONAL TOLERANCES.

DIM. APPLY AFTER FINISH WHERE TOTAL TOL IS .001 IN. OR LESS AND ON ALL THREADS. IN ALL OTHER PLACES DIMENSIONS APPLY BEFORE FINISH

DFTG
ENGR
ENGR

NAME: ADAPTER BAR KIT FOR PORTABLE TAKEUP ASSY

SCALE OF DRG DWG | DRG CHG NO. | WT | REL. DATE

DWG SIZE C | NO. 1-119-C-089 | CODE | SHEET

APPLICATION		REQD NEXT ASSY	REVISIONS				
NEXT ASSY	USED ON		CHG NO.	SYM	DESCRIPTION	DATE	APPROVAL
	1-119-E-001 1-119-E-045 2-119-D-043			B	Rewritten and retyped (Revision A was 2 pages) -045 & -043 USAGE ADDED	7/14/65	N.B.H.

FINAL ADJUSTMENT PROCEDURE
FOR THE
PORTABLE TAKE-UP

A. SERVO SYSTEM POWER SUPPLY AND CONTROL POTENTIOMETER ADJUSTMENTS

The following adjustments are made to the servo system power supply and control potentiometer of the portable take-up at the factory and, normally, no further adjustment is required in the field. However if (a) any electrical component in the servo system is replaced or repaired or (b) the control potentiometer is replaced or repaired, then the procedures below and in Section B (Rotary Storage Arm Adjustment) must be followed. To re-adjust the servo system power supply and control potentiometer:

a. Turn POWER switch on control panel (see item 4 of Figure 4 in Instruction Manual for Portable Take-Up Assembly) off, unplug machine, and remove the rear protective cover.

b. The portable take-up is equipped with a safety interlock switch (S-1) which de-energizes the machine when the protective cover is removed. This switch must be bypassed when making power supply and potentiometer adjustments. Refer to Drawing No. 1-119-E-045 (page C-17 of Appendix C of instruction manual) for

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	DR CH APPD ENGR ENGR	NAME FINAL ADJUSTMENT PROCEDURE FOR PORTABLE TAKE-UP ASSEMBLY	
MATL			
FIN.	DWG SIZE A	SCALE OF ORIG DWG	NO. 1-119-A-074
	REL DATE	WT	CODE / SHEET 1 of 6

AO 768-A 3-61

APPLICATION		REQD NEXT ASSY	REVISIONS				
NEXT ASSY	USED ON		CHG NO.	SYM	DESCRIPTION	DATE	APPROVAL

switch location. The switch is enclosed in a square electrical utility box and the switch plunger, which is spring loaded, extends through the bottom of the box. Pull the plunger downward about 1/4 inch to bypass this interlock switch. It may be necessary to wiggle the plunger while pulling downward.

WARNING

Care must be taken to prevent electrical shock when making adjustments to the machine while this safety interlock is bypassed.

c. Remove the covers from the saturable reactor (amplistat) and the power supply, item 3 of Figure 5 in the manual. The upper box contains the saturable reactor, the lower box contains the power supply. The saturable reactor has two controls; one marked GAIN, and one marked BIAS. These controls may have plastic covers which must be pulled off.

d. Turn control shaft marked BIAS fully counterclockwise.

e. Set control shaft marked GAIN to approximately midpoint of its adjustable range. To do this:

1. Turn the control shaft fully clockwise to one stop; then counterclockwise to the other stop.

2. Note the total amount of rotation between stops and set control to about one half of this rotation.

NOTE

This control requires no further adjustment

f. The control potentiometer is geared to the shaft of the counter-balanced storage arm and the gears must be disengaged. Loosen the gear set screw on the control shaft of the potentiometer. The control potentiometer is designated R-5 on the schematic, Drawing No. 2-119-D-043, page C-16 in the instruction manual. Location of potentiometer (R-5) is shown on Drawing No. 1-119-E-001, page C-2 of the manual.

g. After disengaging the gears, turn the control shaft of R-5 fully clockwise. R-5 is now adjusted to maximum resistance.

UNLESS OTHERWISE SPECIFIED	DR	NAME	
DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS ± DECIMALS ± ANGLES ±	CHK	FINAL ADJUSTMENT PROCEDURE FOR PORTABLE TAKE-UP ASSEMBLY	
	APPD		
MATL	ENGR		
	ENGR		
FIN.			
	DWG SIZE A	SCALE OF ORIG DWG	NO. 1-119-A-074
	REL DATE	WT	CODE SHEET 2 of 6

AO 768-A 3-61

STAT

APPLICATION		REQD NEXT ASSY	REVISIONS				
NEXT ASSY	USED ON		CHG NO.	SYM	DESCRIPTION	DATE	APPROVAL

h. Attach voltmeter leads to terminals 4 and 5 (TB2-4, TB2-5) on the terminal block mounted on the right side of the power supply box. Set meter to 400 volt scale.

i. Plug machine into a 115 vac, 60 cps outlet and turn POWER switch on. Voltage at this point should be 200 ± 5 volts. If the voltage meter does not read 200 volts, then power resistor (R-3) must be adjusted. This resistor which has an adjustable slider is located at the left side of the power supply box. To adjust R-3:

1. Turn the POWER switch off and loosen the screw on the resistor slider terminal and reposition the slider.

2. Move the slider upward to decrease voltage or downward to increase voltage reading. Tighten the slider screw and turn power switch on. Follow this procedure until 200 ± 5 volts is read on the meter.

WARNING

Always turn the POWER switch off before making any adjustments on resistor slider terminal.

j. With gear still loose on control potentiometer shaft, move storage arm to MINIMUM storage position* by rotating the arm counterclockwise (against the counterweight) until its top idler roller is firmly against the stationary idler roller.

NOTE

The storage arm must be held firmly in this position while carrying out step k below. Thus, two people are needed; one to hold the storage arm and the other to make the adjustments.

k. With the voltmeter attached to terminals 4 and 5 of the power supply terminal board (same as step h.) and set to the five-volt scale; turn the potentiometer control (R-5) shaft counterclockwise until the meter reads 1.5 ± .5 volts.

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* Drawing No. 1-119-E-001 on page C-2 of the manual shows the arm oriented in the minimum storage position.

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	APPD		
MATL	ENGR		
	ENGR		
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l. After obtaining the 1.5 ± .5 volts reading, tighten the set screw of the gear to lock it to the control shaft.

m. Rotate storage arm several times and check this adjustment.

n. Turn POWER switch off.

o. Carry out the adjustment procedure in Section B, below.

B. ROTARY STORAGE ARM ADJUSTMENT

The storage arm of the portable take-up was adjusted initially at the factory to provide best possible machine operation under all foreseeable operating circumstances. However, the operator may desire a more precise adjustment of the arm to suit the particular operating conditions in which the take-up is used. Arm adjustment can be made with the control on the saturable reactor (amplistat) marked BIAS. The BIAS control setting determines the steady-state operating (minimum storage) position of the counter-balanced storage arm when continuously taking film from the processor. Clockwise rotation of the BIAS control shaft will move the storage arm counterclockwise thus orienting the minimum storage position of the arm closer to the portable take-up's stationary idler rollers.

If electrical repairs are made and the electrical adjustment procedure in Section A has been carried out, then the storage arm must be re-adjusted as follows:

a. During storage arm adjustment (steps b. through g., below), operate the take-up from a 125 vac, 60 cps source. To obtain this power supply:

1. Use an autotransformer (see Instrument List) to raise the standard 115 vac, 60 cps source. Autotransformer output is then used as the power source.

2. Turn POWER switch on and adjust voltage to read 125 ± 5 volts by varying the autotransformer and monitoring the voltage with an AC voltmeter (see Instrument List). The voltmeter should be attached to terminals 1 and 2 on terminal block TB2 located at the right side of the power supply. Refer to Drawing No. 1-119-E-045.

b. After obtaining a reading of 125 volts, turn the POWER switch off.

c. Load a 1000-foot roll of 9 1/2-inch wide film on the take-up spindle and thread the machine according to the threadup diagram, Figure 6 in the manual.

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Tape the loose end (end "from machine" on the threadup diagram) to a nearby bench or table so that the film will not unthread or pull back through the take-up when the POWER switch is turned on. After initial threading, the storage arm should be in its maximum storage position.

d. Turn POWER switch on. With the switch on, the torque motor for the take-up becomes energized, film is wound on the take-up spool, and the storage arm moves to the minimum storage rest position. Adjust BIAS control such that the upper storage arm roller is approximately 1 1/2 inches from the front lower stationary roller.

NOTE

The BIAS control is rotated clockwise to move the storage arm closer to the stationary roller.

e. Depress the footswitch to de-energize the torque motor for the take-up spindle and to move the arm back to its maximum storage position. Then, release the footswitch so that the storage arm will move to minimum storage position. Note that the storage arm will overshoot this steady-state operating position, return, and stop.

f. To prevent the top idler roller on the storage arm from contacting the front lower stationary roller during overshoot, a roller clearance must be established as follows:

1. Operate the take-up several times by releasing and depressing the footswitch and visually note the minimum roller clearance, if any, during the period of maximum overshoot. This clearance should be no less than 1/4 inch and no greater than 3/4 inch. This clearance is set by adjusting the BIAS control.

2. Operate take-up several times after each new setting of the BIAS control until satisfactory clearance is obtained.

g. Remove the 1000-foot roll, load a small roll (50 feet or less) of film on the take-up spindle, and thread the machine. Operate the take-up machine as above (steps d. and e.) and note clearance of the top roller on the storage arm and the front lower stationary idler roller. The rollers should never come closer than 1/4-inch during maximum overshoot. If the clearance is less than 1/4-inch, re-adjust BIAS control to give 1/4-inch clearance.

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h. Turn the POWER switch off and unplug the machine.

i. Reinstall the power supply and saturable reactor covers.

j. Reinstall the plastic protective cover.

TOOLS AND INSTRUMENTS NEEDED FOR ADJUSTMENT PROCEDURE

A. TOOLS

1. Screwdriver
2. Philips head screwdriver
3. Allen wrench set

B. INSTRUMENTS

1. AC-DC voltmeter with 0-5 volt and 0-400 volt d-c scales, and 0-150 volt a-c scale (Simpson 262 or equivalent)
2. Autotransformer - 150 watt, 125 vac, 60 cps
   Powerstat - Superior Electric or equivalent

C. MISCELLANEOUS

1. 1000-foot roll of 9 1/2-inch wide film on Dexter spool
2. 50-foot roll of 9 1/2-inch wide film on Dexter spool
3. Manual entitled "Operating Instructions for the Portable Take-Up Assembly"

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